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BEFORE THE COMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON AVIATION
ON THE STATUS OF STARS, SEPTEMBER 13, 2001

Chairman Mica, Congressman Lipinski, Members of the Subcommittee:

I am pleased once again to update the Subcommittee on the Federal Aviation Administration's (FAA) effort to develop and deploy the Standard Terminal Automation Replacement System (STARS). We last met on this subject three months ago, at which time I informed the Subcommittee that the Early Display Capability (EDC) version of the STARS technology was operational at both El Paso and Syracuse. We also provided you with information on the schedule, cost, and training pertaining to STARS (and the associated facilities and radars), as well as a contingency plan in the event that unanticipated development problems were encountered with the STARS technology. Today, I would like to update you on where we are with STARS and what our long term risk analysis looks like.

The EDC system continues to be used operationally at El Paso and Syracuse, and we have given approval to install the STARS EDC system at 11 additional FAA facilities. The first of these sites will be Memphis, Tennessee, which is expected to be operational in April 2002. This is the first step in providing the full STARS to our remaining facilities.

The next step is completing the first of three software builds for the Full STARS software. The initial build, known as FS-1, is currently running at El Paso on a separate system that is not used to control live traffic, which we call our "beta site." This allows the facility's air traffic controllers and system specialists to familiarize themselves with the capabilities and to identify operational issues as early as possible. FS-1 does not contain all the air traffic control requirements needed for larger facilities, so it will be used only at El Paso and, eventually, Syracuse.

The FS-1 software recently completed its formal testing at Raytheon. The results were very successful, with the software passing 99 percent of the requirements. However, despite the excellent pass rate, there were more problems identified than we had anticipated. The good news is that the Raytheon testing identified these problems in time for them to be resolved without significant disruption to FAA's schedule. FAA testing of FS-1 is currently scheduled to start in December 2001, and is expected to culminate with the system becoming operational at El Paso and Syracuse in April/May 2002.

The second software build, known as FS-2, includes the remaining air traffic control requirements. Design and coding of this software was completed in March and it is scheduled to begin formal testing at Raytheon in late September.

FS-2+ is the third and final software build. This is the software that will be used for initial operations at the remaining STARS sites, starting with the new Philadelphia TRACON. FS-2+ allows STARS to interface with other air traffic control automation tools used at Philadelphia and several other facilities. Raytheon completed the design and coding of this software ahead of schedule in August 2001 and is on track to start developmental testing of FS-2+ in mid-December 2001, with FAA beginning testing in March 2002. The goal is to have the system in use at the new Philadelphia TRACON in November 2002. The software would then be deployed to the follow-on sites, starting with Portland, Oregon, which is expected to go operational in May 2003.

If the FS-2+ software is not available by the date that we planned to deploy the system to Philadelphia, we have two options. We can provide the Philadelphia facility with the EDC system and install the FS-2+ software as soon as it is available or we can install a Lockheed Martin ARTS-3E system.

With regard to the other sites that have been identified in the early part of the STARS deployment schedule as having a critical operational date, we have determined that the decision whether to purchase additional ARTS-3E systems can be made as late as May 2002. By that time, FS-1 will be operational, and we will have completed the first phase of FAA testing of FS-2+. At that time, we will know with a great degree of certainty whether the STARS development and deployment schedule will remain on track.

The development risks to STARS are primarily in the area of FAA operational testing. Given the excellent pass rate for FS-1 in its recent developmental testing, we are confident that Raytheon will demonstrate similar success in FS-2 and FS-2+, since each of these incremental builds is smaller and less complicated than its predecessors. During operational testing, we need to focus on identifying and fixing those problems that would truly prevent us from commencing operations at Philadelphia in November 2002 with a safe, operationally effective, and operationally suitable service. That doesn't mean that it needs to be a defect-free product, but it cannot have any defects that prevent us from commencing operations. The fixes to some of these defects can and should be deferred to after initial operation is achieved. We have successfully used this approach in developing and fielding the EDC product, and we need to be even more conscientious during Full STARS testing. Similarly, we need to be extremely judicious about injecting additional or modified requirements into the system that would not be needed for initial operations at Philadelphia.

Longer term, the risks to the STARS program are in demonstrating and maintaining a deployment rate of the production systems in accordance with our plans, particularly for the first couple of years when we will be replacing our aging ARTS III-A systems.

Terminal service depends on the combination of several different activities converging at each location—the right resources at the right time in the proper sequence. It is not just the automation and surveillance systems, but also the communications, facility infrastructure, new runways, and myriad other capabilities coming together. Providing Terminal service depends on the planned and integrated convergence of all of these capabilities, on an airport-by-airport basis. That means that we need to understand the situation at each location in addition to what is needed to meet future demands. Then we need to align our efforts to ensure that we are getting the most out of the money we spend.

Bringing together all the elements required to ensure a successful commissioning of the new Philadelphia TRACON in November 2002—including the full STARS software and related contingency plans—is an example of the integrated planning that the FAA has adopted in providing Terminal service. We think this approach, while challenging, is workable.

This concludes my prepared remarks and I look forward to answering any questions that you might have.